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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/659,211 | 09/11/2000 | Noriyuki Hirayanagi | 4641-55447 | 5080 |

7590

09/23/2002

Klarquist Sprakman Campbell Leigh & Whinston LLP
One World Trade Center Suite 1600
121 SW Salmon Street
Portland, OR 97204-2988

EXAMINER

EVERHART, CARIDAD

ART UNIT

PAPER NUMBER

2825

DATE MAILED: 09/23/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/659,211

Applicant(s)

HIRAYANAGI, NORIYUKI

Examiner

Caridad M. Everhart

Art Unit

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-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Vucht (US 4,977,328) in view of Kitagawa, et al. ("Kitagawa")(US 6,166,380).

Applicant has argued that Van Vucht does not teach subtracting backscattered particle data obtained from a region lacking an alignment mark from backscattered particle data obtained from an alignment mark on the substrate.

With respect to claims 1-7, Van Vucht is relied upon as discussed in paper No. 4.

Kitagawa is relied upon for its teaching that in the analysis of backscattered electrons (col. 2, lines 37-41) in an imaging process which uses a particle beam(abstract), the intensity of the backscattering of the substrate or background of the feature being imaged is subtracted from the intensity of the backscattering of the feature being imaged (col. 6, lines 15-30).

One of ordinary skill in the art would have been motivated to have combined the teaching from Kitagawa with the process taught by Van Vucht because it is implicit in the teaching of a contrast which is a difference between the signals of the specimen and the marker taught by Van Vucht that the difference between the signal from the

alignment mark and the background would be obtained by subtracting the background from the signal from the alignment mark.

With respect to claims 8-12, the reasons for the rejection are as discussed in paper No. 4

Applicant has in addition argued that the method of Van Vucht addresses a different problem from applicant's method. This argument is respectfully found not to be persuasive because it is believed that, although the purpose of the method disclosed by Van Vucht may be different from applicant's method, the combination of Van Vucht with Kitagawa shows that the step of subtraction of a signal from the background from the signal from the feature being detected is a step that is known in the prior art and that the method disclosed by Van Vucht encompasses this step. In addition, it is believed that the method disclosed by Van Vucht provides for the determination of the relative position of a specimen provided with a marker, as pointed out in paper No. 4.

.THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Caridad M. Everhart whose telephone number is 703-308-3455. The examiner can normally be reached on Monday through Fridays 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Smith can be reached on 703-308-1323. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

C. Everhart
CARIDAD EVERHART
PRIMARY EXAMINER

C. Everhart
September 18, 2002